Reg Office INPIC

CONFIDENTIAL

998215

NEGOTIATED TASK ORDER

REGISTERED

25X1

30 JUN 1965

(Sections A & E apply)

Gentlemen:

This Negotiated Task Order is entered into by and between the parties hereto, pursuant to statutory authority, as of 22 June 1965.

It is agreed that the Contractor shall provide the necessary material and services to perform the scope of work as set forth in the attached Schedule and shall comply with such other provisions thereof, as may be applicable.

The rights and obligations of the parties hereto shall be subject to and governed by this Task Order and the provisions of subject Basic Contract which are incorporated herein by reference and made a part hereof. To the extent of any inconsistency between said Basic Contract and this Task Order, the latter shall control.

The estimated cost of performing this Task Order, exclusive of the

25X1

Costs in excess of this amount shall not be incurred without the prior written authorization of the Contracting Officer.

25X1

The work to be performed under this Task Order shall be completed on or before 22 December 1965.

Upon execution of all copies of this document, please return to the undersigned the original and one copy, retaining one copy for your records.

EXECUTED:

25X1

Very truly yours,

THE UNITED STATES OF AMERICA

BY _____

TITLE _____

Contracting Officer

25X1

(SCHEDULE)

CONTRACT/TASK ORDER NO.
Contract No.

25X1

SCOPE OF WORK:

The Contractor shall design and fabricate two (2) prototype Modulated-Light Film Viewing Tables in accordance with the Contractor's Proposal No. 64034-B, dated 4 January 1965, as revised by the Contractor's Proposal No. 915031-A, dated 8 March 1965, and as further revised by the Contractor's letter, dated 24 June 1965, said proposal, as revised, being incorporated herein by reference and made a part of this task order.

PERIOD OF PERFORMANCE:

The period of performance for all work under this task order shall be 22 June 1965 to 22 December 1965.

DELIVERABLE ITEMS:

1. Two (2) prototype Modulated Light Film Viewing Tables
2. Preliminary Instruction and Maintenance Manual (to be delivered with first prototype unit).
3. Final Instruction and Maintenance Manual (to be delivered at completion of task order).
4. Monthly narrative reports to include:
   a. Current status of work
   b. Problem areas encountered
   c. Projected work for next monthly period
   d. Status of fund expenditures to end of monthly period
   e. Documentation of any verbal commitments and/or agreements with the Technical Representative of the Contracting Officer during the reporting period.

DELIVERY:

1. Two (2) copies of all reports required under this task order shall be forwarded direct to the Contracting Officer.
2. Three (3) copies of all reports required under this task order shall be forwarded to the Technical Representative of the Contracting Officer at the following address:

NAME OF CONTRACTOR

25X1

25X1

3. In the event any item under this task order is personally delivered to the Technical Representative of the Contracting Officer, a signed receipt, in duplicate, must be obtained from the said representative and one copy attached to any invoice submitted for reimbursement for such items. Failure to do so will result in suspension of payment, since the Disbursing Officer is prohibited from making payment without evidence of delivery.

CONSIGNEE ADDRESS:

25X1

DELIVERY SCHEDULE:

1. First prototype unit to be delivered on or before 11 November 1965. Preliminary Test and Acceptance to be made at Contractor's facility prior to delivery. Final Test and Acceptance to be performed at Government site after delivery.

2. Second prototype unit to be delivered on or before 11 December 1965. Preliminary Test and Acceptance and Final Test and Acceptance to be made at Contractor's facility.

CHANGE OF SCOPE:

Whenever a redirection of effort is required not within the scope originally contemplated, the Contractor may appeal to the Contracting Officer for a written order to perform and a statement that an equitable adjustment in price will be made. Failure to appeal to the Contracting Officer before embarking upon the changed work will not afford protection of the right to additional compensation for such work.

TASK ORDER FEE:

The amount of the fee as set forth in this task order is included solely for funding purposes. The final fee shall be calculated on the Task Order Estimated Fee set forth above and shall be based upon a determination, to be made within thirty(30) days from the date of completion of this task order, by the Contracting Officer, as to the quality of performance of the Contractor for the requirements of the task order. The final fee shall be calculated based upon the performance evaluation as follows:

(SCHEDULE)

CONTRACT/TASK ORDER NO

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Adequate ---------- 8%
Good ---------- 10%
Superior ---------- 12%

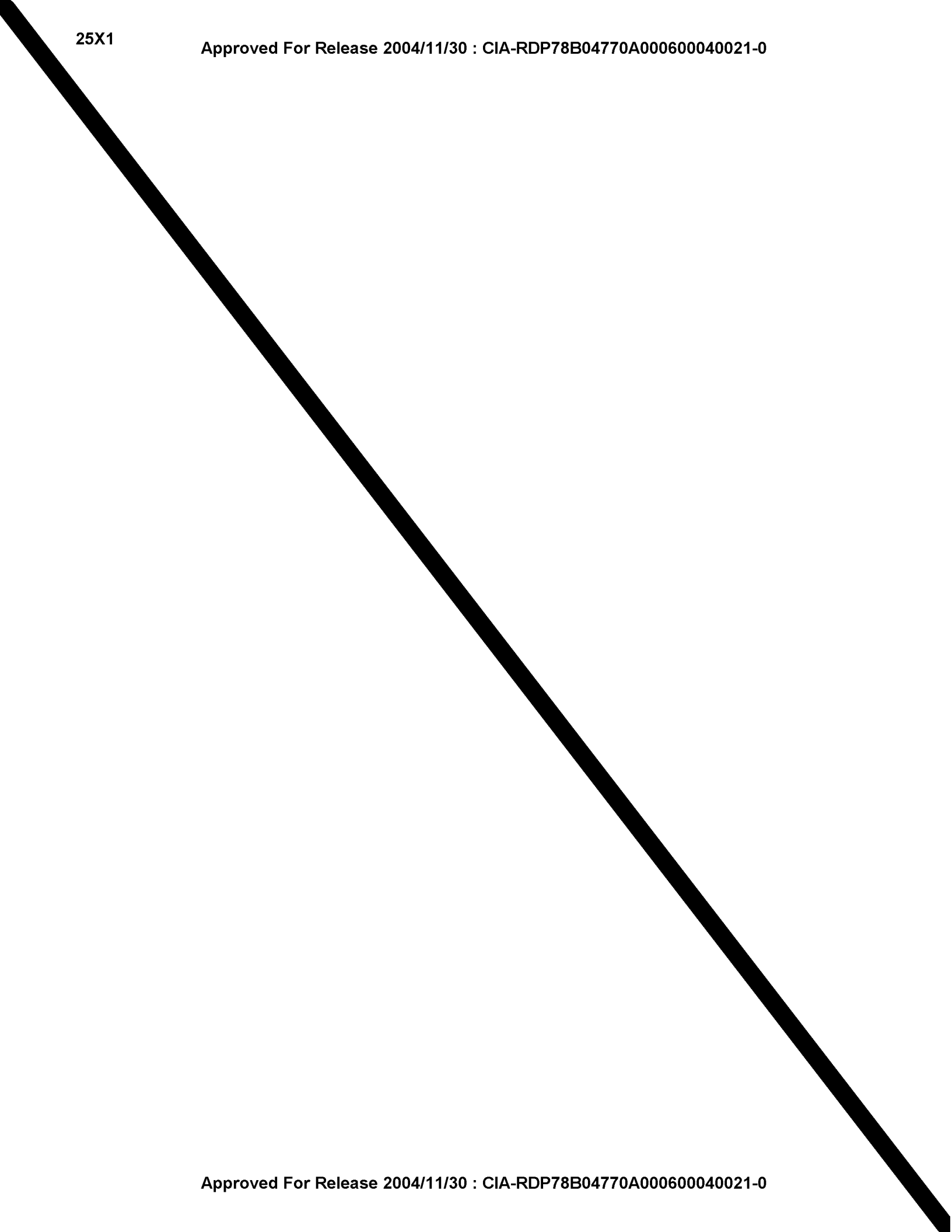
SECURITY:

The reports and equipment to be delivered hereunder are UNCLASSIFIED.

The association of the sponsor with the reports and equipment being procured hereunder is classified CONFIDENTIAL. This classified information shall be divulged only on a need-to-know basis and then only to those who have been authorized in writing by this Government component to have access to classified information. Correspondence originated by the Contractor and/or data to be submitted hereunder, the contents of which contain classified information, or refer to the name/or address of the Contracting Officer shall be stamped by you with the classification of CONFIDENTIAL.

NAME OF CONTRACTOR

25X1



Approved For Release 2004/11/30 : CIA-RDP78B04770A000600040021-0

13 Apr '65 5500-8742-65

5155-4100

5155-4100

NPIC

6X1

3 Copies for NPIC

1. Modulated Light Direct Film Viewers. 1 2 Ea

For development and Production of two identical prototypes in accordance with proposal No. 6403-B dated 23 December 1964.

X1

Proposal in possession of Mr.

X1

Approved by A/DD/I 9 Apr '65

SECRET

TEST AND EVALUATION REPORT

TEST & EVALUATION SUMMARY
of the
[redacted] MODULATED LIGHT FILM VIEWING TABLE

5X1

August 1968

T&E Report No. 68-14

5X1

[redacted]

Test and Evaluation Branch
Technical Performance Division
Technical Services and Support Group
National Photographic Interpretation Center

SECRET

ABSTRACT

Available documentation was reviewed to compile a test and evaluation summary of the [redacted] Modulated Light Film Viewing Table.

Since the equipment was only partially operable, a complete test and evaluation was not performed.

Test results obtained in the direct viewing mode of operation indicate that the principle of light modulation compression can aid in greater target discrimination.

The equipment is not ~~serviceable~~ in its present condition and configuration.

TABLE OF CONTENTS

1. INTRODUCTION

1.1 Objectives

1.1.1 The primary objective of this report ~~was~~ is to document the test and evaluation results that have been obtained from the prototype ~~modulated light film viewing program.~~ Model PR-3600A Modulated Light Film Viewing Table

1.1.2 ~~An~~ additional objectives ~~was~~ are to report the original requirement for the equipment, and

~~1.1.3 The final objective was~~ to record original problems and results of the development.

~~1.1.3.1 Why the equipment was not successful.~~ Omit 1.1.3.1

~~1.1.3.2 What information was gained which could be applied to future related developments.~~ Omit 1.1.3.2

List of information

1.2 ~~Description of Reference~~ Sources

1.2.1 The official contract folder which is kept by DED/TSSG.

1.2.2 A draft dated 28 March 1968 of a memorandum for Chief, DED/TSSG. This draft is entitled: "Evaluation of Prototype Modulated-Light Film Viewer" and was authored by [redacted] both of DED/TSSG.

1.2.3 Operating instruction manual for the Prototype Modulated Light Film Viewer.

1.2.4 ~~Verbal~~ Conversations with members of Development & Engineering Div./TSSG.

1.2.5 Contract inspection reports.

1.3 Purpose of equipment development

1.3.1 The purpose of this program was to develop ~~both~~ a ~~direct viewing and microscopic Viewing Modulated Light Film Viewing table.~~ viewing table with modulated light for both direct and microscopic viewing. This device would be capable of automatically and continuously responding to film densities and spatial frequencies and regulating light accordingly. The effect would be similar to that of a log Etronic Printer.

1.3.2 This device was designed to aid the photo interpreter ~~during observation and detailed analysis of photographic film, and~~ in seeing detail in dark areas adjacent to areas which are brightly illuminated, during observation and detailed analysis of photographic film.

2. DESCRIPTION OF EQUIPMENT

2.1 Status of equipment

2.1.1 As a result of contract cancellation ~~on the development of the modulated light film viewing systems,~~ two Model PR-3600A Modulated Light Film Viewing Tables were delivered to NPIC during March 1967. ~~(and placed in the TPD test and evaluation area, Room 1N-13B.)~~ Both devices were received in an inoperable condition.

2.1.2 Prototype #2 had not been fully assembled and was only partially electrically wired.

2.1.3 Prototype #1 was fully assembled, but was not operating. Electronics personnel from the Equipment Performance Branch/TPD were successful in placing the direct viewing mode in operation. The Microscopic Viewing Mode was not operable due to basic mechanical problems which resulted in faulty roster tracking. The film drive system was also inoperable.

2.2 Physical Description of the Equipment

2.2.1 The equipment, as shown in Figure 1, is contained in a desk type console ~~measuring~~ approximately 6 ft long, 3 ft high, and 2 ft deep. The center section of the console contains the ~~Kirescope~~ kinescope which provides the modulated light. It also contains film reels and the associated film drives. The two end modules contain the kinescope scan drive, video processing and associated circuitry.

2.3 Functional Description of the Equipment

2.3.1 A light source, consisting of a 5/8" scanning spot which is deflected by scanning circuitry in order to form a roster, is transmitted through the film to a photomultiplier head ~~located on the map holder~~. The resulting output signal from the photomultiplier contains video information as to the

density and spatial frequency of the imagery on the film. This video information is amplified and applied as negative feedback to the kinescope, thus modulating the scanning spot and in turn producing light output inversely proportional to the contrast of the scanned area.

3. SUMMARY

3.1 Test and Evaluation Results

3.1.1 Introduction

3.1.1.1 Due to cancellation of the contract and the partially inoperable condition of the equipment, no predelivery acceptance tests were performed. Test and evaluation was only performed on the operable portion of the equipment, eg. the direct viewing mode.

3.1.1.2 The evaluation was performed by ~~Dr. Robert Vincent and Mr. Homer Elliott~~ members OK of DED/TSSG.

3.1.2 Objective Tests- Roster formats of 1"x1", 4"x4" and 9"x12" were used for the tests.

Delete from 3.1.2. add to 3.1.2.1.

3.1.2.1 Luminesence decay with respect to time was noted on all but the 9"x12" roster. Illumination tended to ~~sobilize~~ stabilize after more than five minutes operation.

3.1.2.2 Kinescope modulation was not constant across the various size roster formats. This indicated a problem caused by the location of the photomultiplier pickup head with respect to the kinescope roster. However, this variation was not noticeable during subjective testing.

3.1.2.3 Modulation compressions of 30:1 for the 9"x12" roster, 50:1 for the 4"x4" roster and 12:3:1 for the 1"x1" roster were obtained.

3.1.2.4 Maximum average luminance brightness of 9,000 foot-lamberts with a 1"x1" roster, 800 foot-lamberts with a 4"x4" roster and 105 foot-lamberts with a 9"x12" roster. USER OBTAINED.

3.1.3 Subjective tests

3.1.3.1 Several selected areas of imagery were viewed using the variable parameters of the equipment, ~~eg.~~ i.e., roster size, modulation and brightness. The conclusion

reached during the tests was that the targets were more easily discernible to the photo interpreter using this equipment than when the targets were viewed conventionally.

3.2 Operational Suitability

5X1 3.2.1 [redacted] of IAS wrote in a memorandum (M/EB 349/65) for Chief, IAS -- "it is believed that the light table may find primary applicability for scanning relatively large scale photography (due to large spot size of electron beam). However, its usefulness in viewing smaller scale material should be investigated" -- "The requirement for stereo viewing must be recognized in the design of any light table."

5X1 3.2.2 [redacted] concluded in their test report -- "as presently configured, the equipment is not adequate for efficient use in the daily photo interpretation cycle. With further refinement of the operating features and reduction in overall size, it could be used as a standby piece of special equipment to supplement the routinely used light tables."

4. CONCLUSION

4.1 The use of the light modulation compression technique as an aid to greater target ~~disgression~~ discrimination in the duct viewing mode has been demonstrated, however, the equipment cannot be utilized in its present condition and in the daily interpretation cycle configuration. The use of the microscopic mode as an aid to greater target ~~disgression~~ discrimination has not been demonstrated because the microscopic viewing mode was inoperative.

5. Recommendation

5.1 ~~It is recommended that the~~ The assembled viewer ~~be retained~~ for further in-house research & development study of the viewing light modulation technique and the practicability of ~~reducing~~ refinning operating features and reducing overall size. ~~It is recommended that the~~ The partially assembled viewer be salvaged with retention of ~~some~~ selected parts from it for the assembled viewer.